

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

In the Office Action of March 20, 2008, in items 2 and 3, claims 1-6, 20, 23, 26, and 29 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The language of these claims has been amended to recite two optical fibers, reflecting the elected species; the withdrawal of this rejection is respectfully requested. However, the Applicants do not disclaim the subject matter of the non-elected species, wherein a single path, e.g., an optical fiber, is utilized, e.g., through wavelength division multiplexing or through a superposition of independent polarization states of the photons.

In items 4 and 5, claims 1, 2, 3, 6, 17, 20, and 23 were rejected under 35 USC §103(a) as being unpatentable over Piehler (US 6,304,369) in view of Berthold et al. (US 7,174,096); in item 6, claims 4 and 5 are rejected under 35 USC §103(a) as being unpatentable over Piehler and Berthold et al. in further view of Henmi (US 6,137,603) and Toba et al. ("An Optical FDM-Based Self-Healing Ring Network Employing Arrayed Waveguide Grating Filters and EDFA's with Level Equalizers" *IEEE Journal on Selected Areas in Communications*, Vol. 14, No. 5, June 1996, pages 800-813); in item 7, claims 26 and 29 are rejected under 35 USC §103(a) as being unpatentable over Piehler and Berthold et al. in further view of Miyauchi et al. (US 5,877,881) and Gnauch et al. (US 5,303,079). These rejections are traversed for the reasons below, and their withdrawal is respectfully requested.

Claim 1 recites a radio frequency optical transmission system for optically transmitting a radio frequency signal comprising a control station for generating two phase-conjugated optical signals having their intensities modulated with the radio frequency signal, and transmitting the generated two phase-conjugated optical signals in a predetermined transmission form via two optical fibers. Claim 1 also recites that the system has at least one base station for receiving the two phase-conjugated optical signals transmitted in the predetermined transmission form from the control station via the two optical fibers, respectively, and selectively processing one of the received two phase-conjugated optical signals that has a greater signal power intensity. This

combination is not disclosed by the prior art, either individually or in obvious combination.

Piehler discloses an optical transmission system wherein the two phase-conjugated optical signals are recombined by balanced receivers. This removes common mode noise, such as relative intensity noise, from the output signal. The optical transmission system requires two signals 180° different in phase to be recombined in a balanced receiver system.

Berthold et al. discloses an optical transmission system with redundant transmission lines. The signals transmitted on all the transmission lines are identical, and a line with a better signal quality is selected as the communication path. Berthold does not disclose transmitting phase-conjugated (i.e. different) signals on the different communication paths.

Modifying the system of Piehler based on the teachings of Berthold so as to choose only the strongest signal of the two transmission lines (as in Berthold et al.) would not result in or render obvious the system recited in claim 1 because such a modification would render the optical transmission system of Piehler without the ability to remove noise from the system, which goes against the teaching of Piehler. Using identical signals on the transmission lines (as in Berthold et al.) would result in a loss of the signal in the balanced receivers in the optical transmission system of Piehler. Nor would redundancy in the individual transmission lines of Piehler, as disclosed in Berthold et al., result in the present invention.

Thus, Piehler and Berthold et al. do not disclose or suggest the combination of features as recited in claim 1. Further, none of the prior art of record obviates these shortcomings; there is no prior art of record which would have caused a person having ordinary skill in the art to modify Piehler so as to result in, or otherwise render obvious, the present invention according to claim 1. So, it is respectfully submitted that claim 1 is allowable over the prior art of record, as are claims 2-6, 17, 20, 23, 26, and 29 depending from claim 1.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels that there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Kouichi MASUDA et al.

/Aldo A. D'Ottavio/

By: 2008.06.20 14:38:42 -04'00'

Aldo A. D'Ottavio
Registration No. 59,559
Agent for Applicants

AAD/JRF/led
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
June 20, 2008